Negative Equity and House Price Risk in Australia

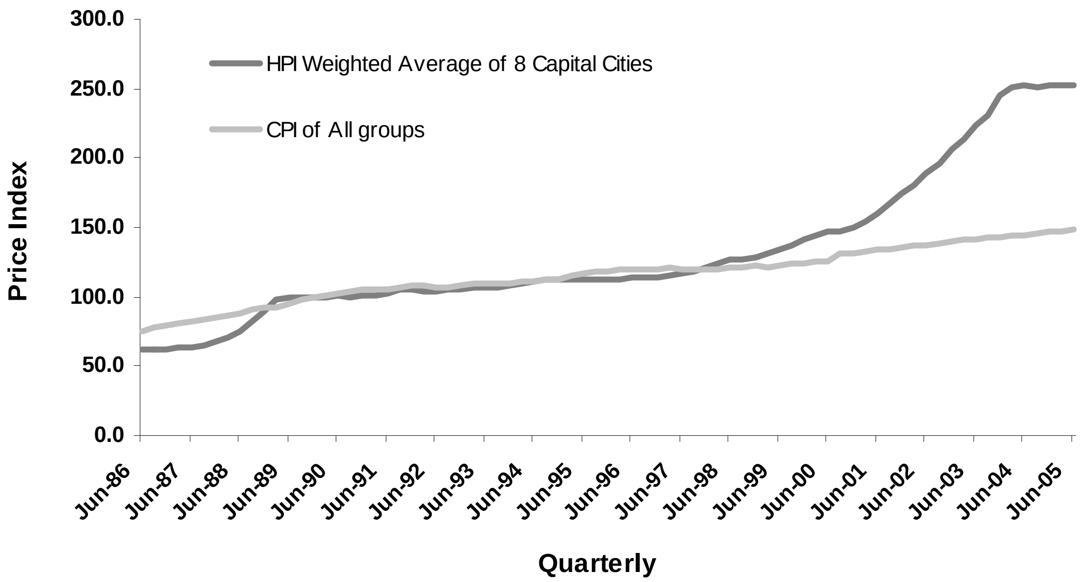
Wood, G. & Parkinson, S.
February 5th 2009

Gavin Wood & Sharon Parkinson AHURI RMIT Research Centre
Bldg 15 Level 4, GPO Box 2476V, Melbourne, Vic 3001 Australia
Tel. +61 3 9925 9885 Fax +61 3 9925 9888

Housing Market Context

When mortgage interest rates declined from the mid-1990s onwards, outstanding mortgage debt spiralled as home buyers were able to finance their housing at ever higher prices. The debt 'mountain' was boosted by existing home owners releasing housing equity using flexible mortgage products and the relaxation of lending standards amongst some lenders allowing first home buyers to purchase at prices beyond their reach. While house prices continued to boom, fears about steep increases in mortgage debt were assuaged. Since 1996 house prices have increased at rates well in excess of consumer price inflation in all cities. Figure 1 compares the weighted average (State Capitals) ABS house price index from June 1986 through to June 2005 with the Consumer Price Index for the corresponding period. It shows that house prices were stable in the first half of the 1990s. The boom began in 1996 and lasted until 2003-04, when they reached levels approximately 2.5 times their 1990 level. House price inflation matched consumer inflation until mid 1999, when house prices accelerated ahead of the CPI.

Figure 1. Weighted Average House Price Indexes of Eight Capital Cities



Note 1: Index =100 in June 1989
Source: Established House Price Index, Pre-September Quarter 2005 Methodology, ABS Cat. 6416.0
Consumer Price Index, All Groups Weighted Average of all Capital Cities, ABS Cat. 6401.0

More recent trends across the state capitals (see from figures 2-7) suggest that the 2003-04 plateau in national house prices was largely due to price declines in Sydney's housing market. Early signs of a price 'bust' are also apparent in Brisbane and Canberra, while house prices have proved more resilient in Adelaide and Melbourne (at least during the first half of 2008). It would seem that the housing market price boom is over and we may be about to enter a period of house price decline, one that could become steep if unemployment numbers rise at the kind of rates experienced by countries such as Britain and the USA.

Figure 2. Sydney

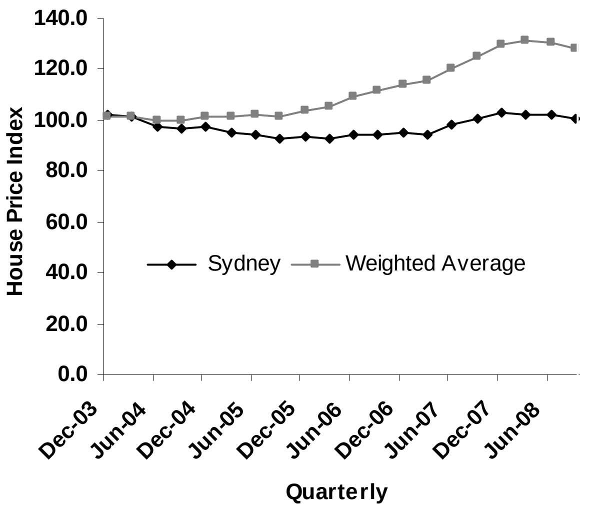


Figure 3. Melbourne

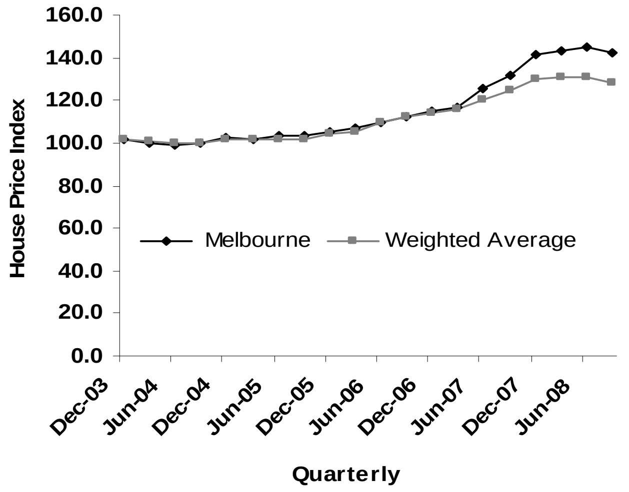


Figure 4. Perth

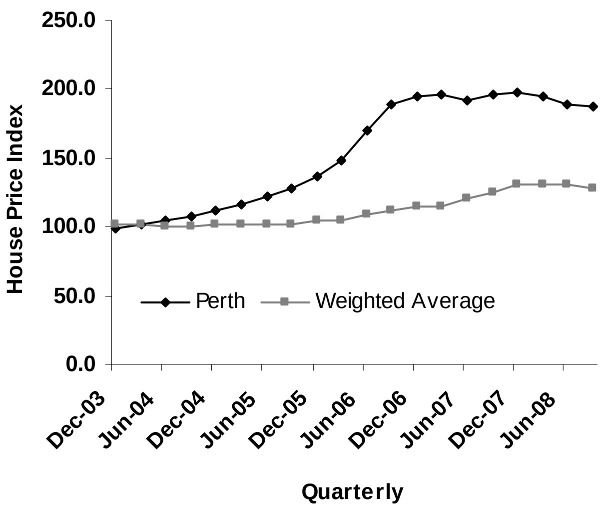


Figure 5. Brisbane

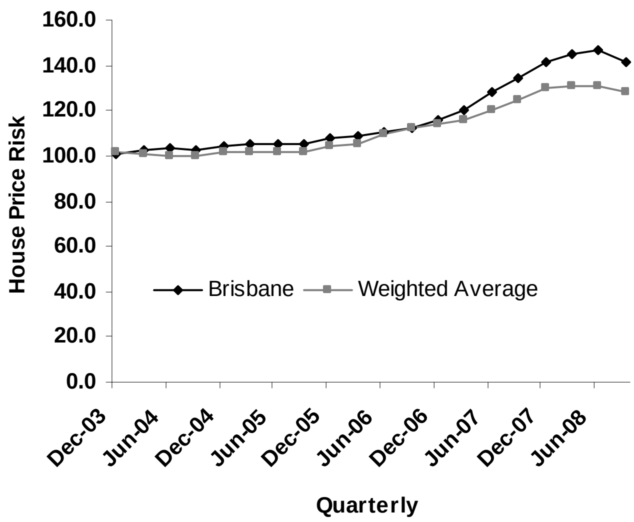


Figure 6. Adelaide

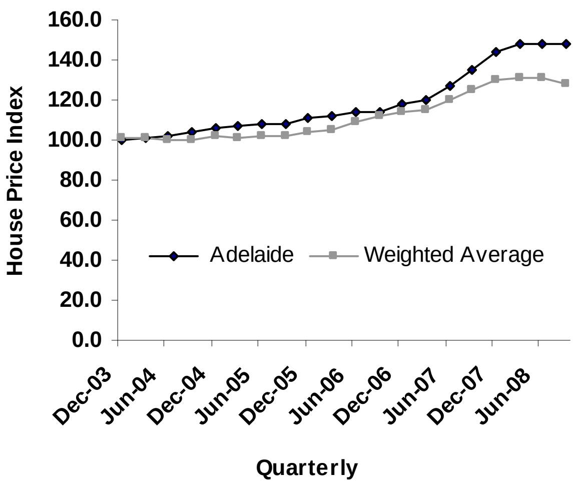
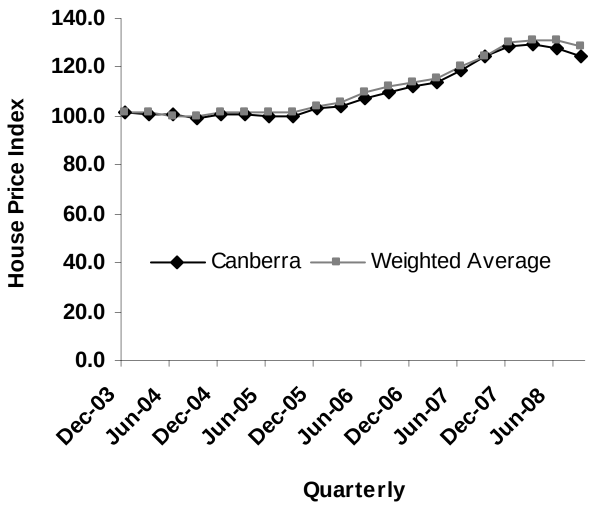


Figure 7. Canberra



Source: House Price Indexes: Eight Capital Cities, September 2008 Quarter, ABS Cat. 6416.0

House price declines raise fears of negative equity and repossession in Australian housing markets. In this short paper we conduct a *simulation* that estimates the number of Australian homeowners that will have negative equity in their homes if house prices were to slump by 10 percent on a uniform or national basis.

The analysis also features a description of the personal characteristics of these home owners, including their wider financial position. It is important to note that this is not a forecast about future house prices; we are conducting a hypothetical exercise that identifies the type of and number of home owners that would be affected by negative equity *if house prices decline by 10 percent*. We also assume that the 10 percent decline occurs quickly rather than spread out over years.

House price declines and negative equity might be comfortably accommodated by an Australian housing market where those adversely affected have other savings that they can fall back on, and few if any other debts or financial difficulties. The evidence presented below suggests that this sanguine perspective is not justified. Many of those with negative equity have relatively low savings and they have other debts that exceed those of homeowners that are less exposed to price risk and negative equity.

Study Method

We use a cross-section from the sixth wave (corresponding to the year 2006) of the Household Income and Labour Dynamics in Australia (HILDA) Survey. HILDA is a nationally representative longitudinal survey that seeks to interview the same households and individuals each year. In waves two and six a special collection on wealth was included in the survey enabling detailed analysis of the income, savings, assets and total debts of responding households. We make use of this wealth data in order to examine the wider financial position of Australian home owners affected by negative equity.

To determine the potential impact of a house price decline we concentrate on a sample of single property home owners with mortgages (home buyers or mortgagors). The analysis focuses on single property mortgagors as this group are most likely to be vulnerable to price risk – that is these people are most at risk of losing their homes in the event of unexpected changes in house prices. There are 1,791 households and 3,105 persons (persons age 15 and over, excluding children) in this sample. Household and person weights from HILDA have been used in order to provide population estimates of the total number of Australians affected by price declines. The population represented by the sample is 2.1 million households that are purchasing their own homes – but own no other property – or 3.6 million persons.

Analysis of personal characteristics is conducted using all adult persons that reside in the household, but their negative equity position is computed on a household basis. Thus if there is a couple (say Carol and Ted) with no children the personal characteristics (e.g. age) of both partners will be included in computations, but when cross-tabulated with negative equity the latter is calculated on a household basis. Both Carol and Ted are then given the same negative equity value in the tabulations reported below. We begin by reporting the numbers of home owners affected if house prices slump by 10 percent on a uniform basis across Australia.

How Many Home Buyers Face Negative Equity?

If house prices were to decline by 10 percent we estimate that 110,300 mortgagors (that only own their primary residence) would be left with negative equity in their homes - representing 2.7 percent of all homeowners or 5.3 percent of all mortgagors. This affects 170,597 adults within the household who either jointly or singly own their primary residence. If we include multiple property owners with debt secured against the primary residence the picture is worse with 208,402 households (7.4%) or 348,716 adult persons with negative equity in their primary residence[1]. The analysis reported in the remainder of this paper focuses on households purchasing a primary residence and no other property investments. This group are most likely to be the focus of concern from a social policy perspective, as any negative equity is the result of buying a home to live in rather than what might be viewed as a speculative investment.

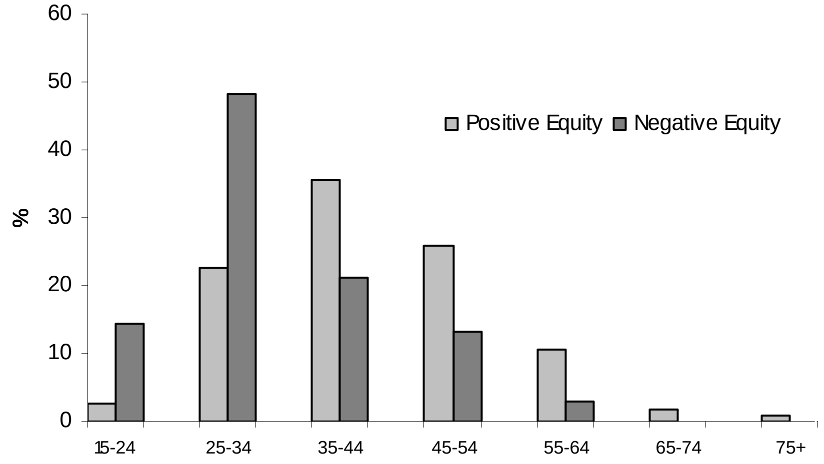
Some home buyers will end up with large amounts of negative equity in their home – 25 percent (43, 434 Australians) of those with negative equity have mortgages that exceed the value of their homes by $40, 000 or more. But the typical homebuyer with negative equity is estimated to have a mortgage debt $13,600 more than the value of their home. Among the state capitals, Sydney is the most affected. It accounts for one-third of home buyers projected to have negative equity, which is relatively high as Sydney accounts for only 20 percent of the country's mortgagors. A note of caution is warranted here; the survey date (2006) pre-dates the housing market slowdown in most Australian cities. Sydney is the exception with house prices on a downward trend since 2004. The other cities had not (as of 2006) reached the same point in the house price cycle, and so our simulations might underestimate the scale of the negative equity problem elsewhere in Australia.

[1] The number of households in negative equity with a 10 percent decline is smaller if calculating equity from the total value of all properties owned and the total amount of debt secured against all properties. The number of households experiencing negative equity based on 2006 value of all properties was 152,193 (5% of mortgagors). There are 229,114 (4% of mortgagors) adult persons living in these households.

Profile of Home Buyers Threatened by Negative Equity

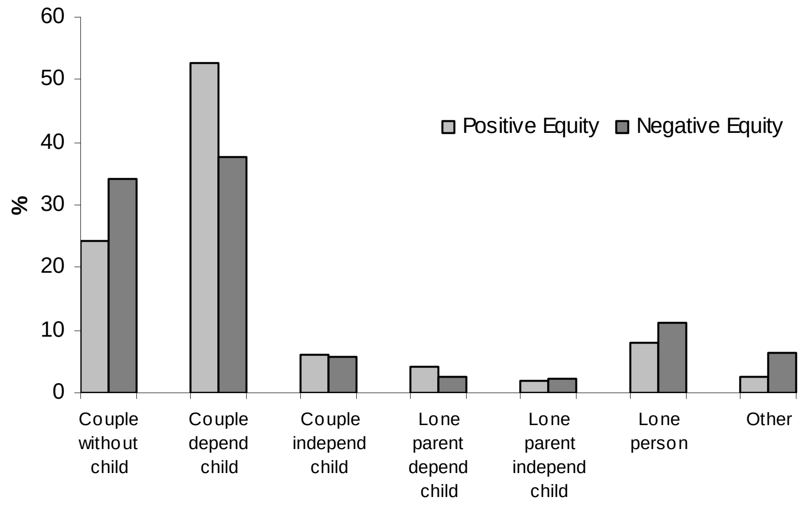
The picture emerging from the demographic profile of those with negative equity is one of younger couples in the early stages of family formation who have recently purchased their home and are especially reliant on earnings from full time employment (shown in figures 8 to 11). Nearly half of those with negative equity (48%) are aged between 25-34 years old and a further (21%) aged between 35-44 years, considerably younger than the profile of those with positive equity. They are also more likely to be couples with dependant children (37.7%) or couples without children (34%).

Figure 8. Age Groups, HILDA 2006



Note: Weighted single property owner individual income units with debt

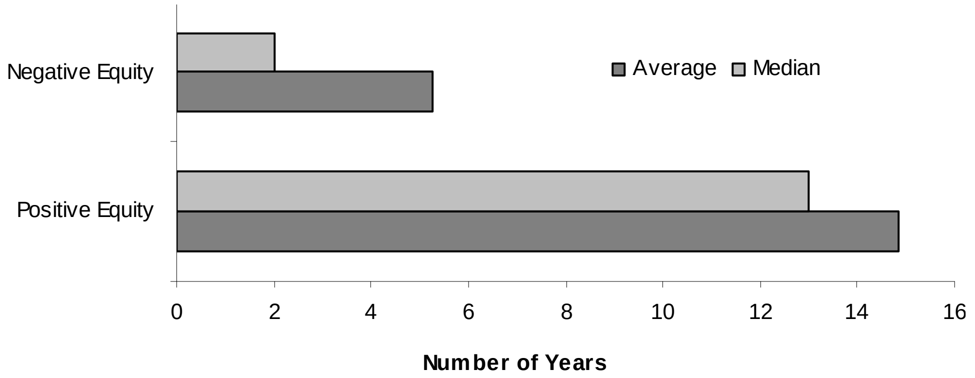
Figure 9. Family Type, HILDA 2006



Note: Weighted single property owner individual income units with debt

Given the above demographic profile it is perhaps unsurprising to find that home buyers most vulnerable to price risk and negative equity are in the early stages of their housing careers. Around one-half of mortgagors with negative equity became first home buyers within 2 years of the survey date (see figure 10). These are then Australians who have taken on high loan-to-value ratios in order to become home buyers for the first time. This will reflect the house price boom that has placed growing financial demands on home buyers struggling to put together a deposit for their first homes.

Figure 10. Equity Status by Years Since First Becoming a Home Owner, HILDA 2006

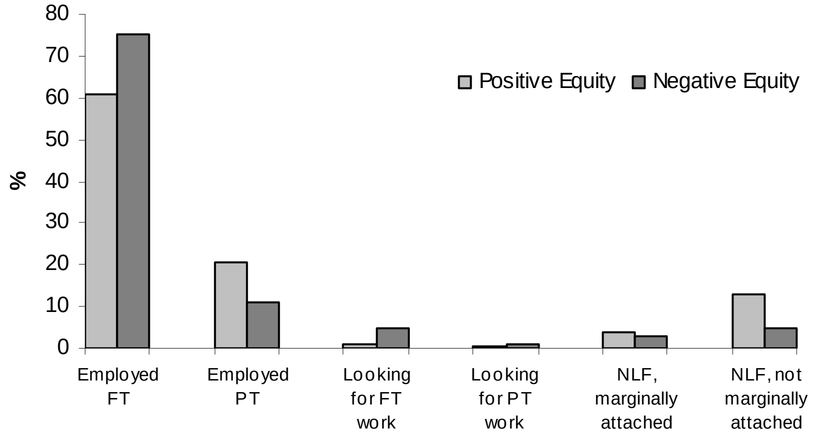


Notes: Home owner duration is calculated by subtracting age at first purchase of a residential property from current age.

2. Weighted single property owner individual income units with debt

Three-quarters of Australian home buyers threatened by negative housing equity are in full-time employment (see figure 11). Indeed as shown in table 1, their household incomes are typically higher than those of home buyers with positive housing equity. This likely reflects the preponderance of dual income couples among the sample of home buyers vulnerable to house price risk. It may be that the labour market participation of these couples is motivated by the large mortgages required to finance first transitions into homeownership or their transition into home purchase is made possible by their full-time dual income status (Parkinson, forthcoming).

Figure 11. Employment Status, HILDA 2006



Note:. Weighted single property owner individual income units with debt

There are very low levels of self-employment among home buyers threatened by negative equity. While self employment is likely to carry greater risks for mortgagors, current economic trends indicate continued increases in the number of job losses (ABS, 2009). Should the employment prospects of these highly indebted young households become precarious, a slide into negative equity could trigger mortgage defaults and repossessions. This is more likely if those threatened by negative equity have low savings and few assets to fall back on.

The Balance Sheet of Vulnerable Home Buyers

This next section examines the balance sheet of home buyers drawing on the special wealth collection in HILDA. Table 1 compares selected indicators of savings, debt, income and housing costs amongst those with negative and positive equity. The overall pattern amongst those with negative equity is one of lower savings and assets and higher levels of debt, not only mortgages but also credit cards and other loans. While the average household incomes of home buyers endangered by negative equity are higher (12%), their average mortgage repayments are more than 50 percent greater.

Table 1. Household Savings, Debt, Income and Housing Costs, HILDA 2006

Average Amounts[1]	Positive Equity	Negative Equity
Selected indicators of savings		
Total bank accounts	$16,736	$8,656
Value of home[2]	$417,119	$307,313
Total household superannuation	$122,249	$67,840
Total household assets	$645,034	$463,804
Household net worth	$478,628	$95,514
Selected indicators of debt		
Credit card debt	$5,683	$7,716
Car loan/loans/HP/overdraft/overdue bills	$26,500	$39,403
Mortgage debt	$145,410	$318,010
Household all debt	$168,191	$370,872
Income & housing costs		
Gross household income	$46,541	$52,313
Mortgage repayments	$1,362	$2,204

1. Averages are calculated for those home buyers that have positive values for the indicated debt or asset. For example the average credit card debt is calculated with respect to those homebuyers with positive balances on their credit card accounts.
2. Self reported estimates of 2006 home value.

The asset position of home buyers threatened by negative equity is inferior because they have superannuation that is around one-half the balances held by home buyers that retain positive housing equity. In addition, the average value of the two groups' homes differ by more than $100,000, but those retaining positive equity have much lower debt. These contrasting housing asset and debt positions are to be expected - those facing the prospect of negative equity have only recently made the transition into home ownership. More unexpected is the observation that some of those forecast to slide into negative equity given a 10 percent fall in prices, were already in such a position back in 2006 when their average mortgage debt ($318,000) exceeded the average value of their homes ($307,000)[2]..

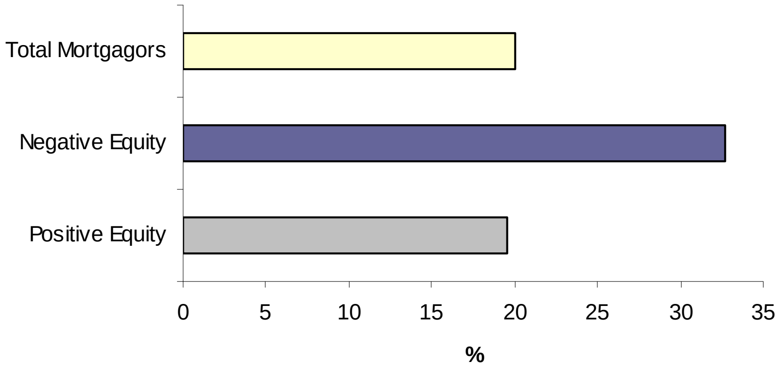
[2] We estimate that 16,976 Australian home buyers were already holding negative equity in their homes at 2006 values.

Early signs of financial stress among home buyers threatened by negative equity are a further cause for concern. In HILDA participants are asked to indicate if they had experienced any of the following because of financial constraints in the past twelve months:

- Could not pay electricity, gas or telephone bills
- Could not pay the mortgage or rent on time
- Pawned or sold something
- Went without meals
- Was unable to heat home
- Asked for financial help from friends or family
- Asked for help from welfare/community organisations.

These seven indicators have been combined in a number of ways in the literature to provide a measure of financial stress (La Cava & Simon, 2005; Breunig & Cobb-Clark, 2006). Following La Cava & Simon (2005) we define financial stress as experiencing one or more of the above difficulties. Figure 12 shows the total proportion of mortgagors reporting one or more indicators of financial stress and compares the different proportions experiencing financial stress amongst those with positive and negative equity.
As shown in figure 12, the likelihood of experiencing financial stress is 13.5 percentage points higher for those predicted to have negative equity (33%) compared with home buyers retaining positive equity (19.5%).

Figure 12. Equity and Financial Stress$_2$, HILDA 2006;



1. Weighted single property owner individual income units with debt
2. Percentage experiencing one or more indicators of financial stress1

Home buyers endangered by negative equity were more likely to:

- Report difficulties with paying utility bills on time (26% as compared to 13% for home buyers retaining positive equity)
- Seek financial help from family and friends (19% as compared to 9% for home buyers retaining positive equity).

A particularly relevant signal of financial stress is failure to keep up with repayment schedules. Home buyers with negative equity were significantly less likely to report that they were ahead of their repayment schedule (29%) compared with those in positive equity (54%). More commonly, nearly two thirds of those with negative equity were making only the minimal repayments associated with being on schedule (61%) compared with 42 percent of those with positive equity. Falling behind in their repayment schedule was also more common amongst those with negative equity (11%) than positive equity (4%). Together these findings on financial stress are likely due to high housing cost commitments and other debt obligations that are eating into the overall household budgets of young Australians who have stretched themselves financially in order to attain home ownership.

Concluding Comments

Price declines of 10 percent could leave over 300,000 Australians with negative equity in their homes. The majority of those with negative equity own their primary residence and have no other property investments. They are typically younger couples who have taken out large mortgages to establish themselves as home buyers during a period when house prices were booming. Though most are employed in either full time or part time jobs, they lack savings that they can fall back on in times of financial stress, and will have to repay relatively high credit card balances and other loans (e.g. car loans) that jeopardise their financial position.

These findings suggest that there is a group of young home buyers vulnerable to default and repossession if labour markets deteriorate. Loss of employment with such high levels of debt and negative equity in their homes could be devastating. Policy makers might be advised to consider emergency measures to help these people stay in their homes. There are good economic reasons for such intervention in addition to the social policy concerns raised by the danger of default and repossession.

Evidence from the United States suggests that mortgage foreclosures have particularly adverse impacts on housing market activity and prices. Substantial declines in house prices at a time when households have already suffered large wealth losses due to falling share prices, could seriously weaken domestic consumption, and increase the prospects of serious recession. In the longer run governments might consider ways in which mortgagors might insure their housing equity, and avoid the kind of risks that now threaten the wellbeing of tens of thousands of younger Australian homeowners.

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Acknowledgement & Disclaimer

This paper uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey.
The HILDA Project was initiated and is funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is managed by the Melbourne Institute of Applied and Economic and Social Research (MIAESR).
The findings and views reported in this paper, however, are those of the authors and should not be attributed to either FaHCSIA or the MIAESR.